| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|----------|---------|---|---|---------------------|---------|------------------|
| S1 | 6 | ("3538230").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2005/11/17 11:14 |
| S2 | 158 | "0003676" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR . | ON | 2005/11/17 13:28 |
| S3 | 722668 | oral care and toothpaste and mouthwash and cationic monomer and anionic monomer | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17.13:31 |
| S4 | 1479420 | oral care and toothpaste and mouthwash and ar-vinylbenzyl trimethylammonium chloride monomer and anionic monomer | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 13:32 |
| S5 | 26558 | (oral care and toothpaste and mouthwash) and (ar-vinylbenzyl trimethylammonium chloride monomer) and (anionic monomer) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 13:33 |
| S6 | 1003 | (oral care and toothpaste and mouthwash) and (ar-vinylbenzyl trimethylammonium chloride monomer) and (vinylacetate) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 14:23 |
| S7 | 10 | (oral care toothpaste mouthwash) with (ar-vinylbenzyl trimethylammonium chloride monomer) with (vinylacetate) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 13:59 |
| S8 | 537 | (oral care and toothpaste and mouthwash) with (cationic monomer) and (vinyl acetate) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 15:30 |
| S10 | 85 | (oral care and toothpaste and mouthwash) with (styrene) and (vinyl phosphonic acid) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 15:37 |
| S11 | 35798 | (oral care toothpaste mouthwash) with (styrene vinyl phosphonic acid) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 15:38 |

| S12 | 143 | (oral care toothpaste mouthwash) with (styrene) with (vinyl phosphonic acid) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 15:40 |
|-----|---------|---|---|----|------|------------------|
| S13 | 12915 | (oral care toothpaste mouthwash) with (cationic mono polymer) with (anionic mono polymer) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 15:52 |
| S14 | 2699240 | oral care toothpaste mouthwash with cationic mono polymer with anionic mono polymer | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:06 |
| S15 | 27 | "5096699" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:16 |
| S16 | . 11 | "4327977" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON . | 2005/11/17 16:17 |
| S17 | 18 | "4889713" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:19 |
| S18 | 18 | "5139769" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:20 |
| S19 | 16 | "5017362" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:22 |
| S20 | 23 | "4921693" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:41 |
| S21 | 6 | "2005003998" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:42 |

| S22 | 2 | "20050032998" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 16:59 |
|-----|------|--|---|------|----|------------------|
| S23 | 204 | (vinyl phosphonic acid methacryloxyl ethyl trimetyl ammonium chloride) with (hydroxy ethyl acrylate)with (toothpase mouthwash) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 17:16 |
| S24 | 1156 | 424/48 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 18:42 |
| S25 | 497 | 424/48 and toothpaste | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 18:43 |
| S26 | 0 | 424/48 and toothpaste with co-monomers | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/17 18:43 |
| S27 | 2 | (vinylphosphonic acid) with (methacryloxyl ethyl trimetyl ammonium chloride) with (2-hydroxyethylacrylate)with (toothpase mouthwash) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/18 11:32 |
| S28 | 2 | (vinylphosphonic acid) with (methacryloxyl ethyl trimetyl ammonium chloride) with (hydroxyethylacrylate)with (toothpase mouthwash) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/18 09:09 |
| S29 | 17 | (vinylphosphonic acid) and (methacryloxyl ethyl trimetyl ammonium chloride) and (hydroxyethylacrylate)and(toothpas te mouthwash) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR . | ON | 2005/11/18 11:23 |
| S30 | 412 | (vinylphosphonic acid) and (methacryloxyl ethyl trimetyl ammonium chloride) and (hydroxyethylacrylate)and(toothpas te mouthwash chewing gum) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/18 11:27 |
| S31 | 3 | "6821507" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/18 11:27 |

| S32 | 0 | (vinylphosphonic acid) with (methacryloxyl ethyl trimetyl ammonium chloride) with (2-hydroxyethylacrylate)with (toothpase mouthwash) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | NEAR | ON | 2005/11/18 11:32 |
|-----|-----|--|---|------|----|------------------|
| S33 | 740 | (oral care and toothpaste and mouthwash) with (cationic monomer) and (anionic monomer) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | ON | 2005/11/18 11:32 |

L4

(FILE 'HOME' ENTERED AT 10:37:49 ON 18 NOV 2005)

FILE 'HCAPLUS' ENTERED AT 10:38:00 ON 18 NOV 2005 L1 4 US2005063918/PN OR US2003-665710# /AP,PRN

FILE 'REGISTRY' ENTERED AT 10:39:46 ON 18 NOV 2005

FILE 'HCAPLUS' ENTERED AT 10:39:46 ON 18 NOV 2005 L2 TRA L1 1- RN : 41 TERMS

FILE 'REGISTRY' ENTERED AT 10:39:47 ON 18 NOV 2005

L3 41 SEA L2

40 L3 AND PMS/CI

L5 5 L4 AND P/ELS

L6 1 ACRYLIC ACID/CN

FILE 'STNGUIDE' ENTERED AT 10:48:31 ON 18 NOV 2005

FILE 'REGISTRY' ENTERED AT 10:52:19 ON 18 NOV 2005 SEL RN 1-2 L5

L7 2 E1-2 AND L5

FILE 'HCAPLUS' ENTERED AT 10:53:01 ON 18 NOV 2005 L8 2 L7

FILE 'REGISTRY' ENTERED AT 10:53:16 ON 18 NOV 2005

L9 1 1746-03-8

L10 320 1746-03-8/CRN

L11 1 818-61-1

L12 17338 818-61-1/CRN

L13 1 5039-78-1

L14 1288 5039-78-1/CRN

L15 1 13880-05-2

L16 173 13880-05-2/CRN

FILE 'REGISTRY' ENTERED AT 10:54:56 ON 18 NOV 2005

FILE 'REGISTRY' ENTERED AT 10:55:49 ON 18 NOV 2005

L17 1 L10 AND L12 AND L14

L18 1 L10 AND L16

L19 2 L17-18

FILE 'HCAPLUS' ENTERED AT 10:57:01 ON 18 NOV 2005 L20 2 L19

FILE 'HCAPLUS' ENTERED AT 10:58:47 ON 18 NOV 2005 L21 2 L9 AND L11 AND L13

L22 0 L9 AND L15

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                 "Ask CAS" for self-help around the clock
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                Powerful new interactive analysis and visualization software,
                STN AnaVist, now available
NEWS
        AUG 11
                STN AnaVist workshops to be held in North America
NEWS
     5
        AUG 30
                CA/CAplus -Increased access to 19th century research documents
NEWS
        AUG 30
     6
                CASREACT - Enhanced with displayable reaction conditions
NEWS
     7
        SEP 09
                ACD predicted properties enhanced in REGISTRY/ZREGISTRY
NEWS
        OCT 03
                MATHDI removed from STN
NEWS 9
        OCT 04
                CA/CAplus-Canadian Intellectual Property Office (CIPO) added
                to core patent offices
NEWS 10
        OCT 06
                STN AnaVist workshops to be held in North America
NEWS 11
        OCT 13
                New CAS Information Use Policies Effective October 17, 2005
NEWS 12
        OCT 17
                STN(R) AnaVist(TM), Version 1.01, allows the export/download
                of CAplus documents for use in third-party analysis and
                visualization tools
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                Free KWIC format extended in full-text databases
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                DIOGENES content streamlined
                EPFULL enhanced with additional content
NEWS 15
        OCT 27
NEWS 16 NOV 14 CA/Caplus - Expanded coverage of German academic research
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT
             MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
             AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005
NEWS HOURS
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=> s 1746-03-8/crn

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L2 550 L1

=> s 818-61-1/crn

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L4 12250 L3

=> s 5039-78-1/crn

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L6 3781 L5

=> s 12 and 13 and 14 12250 L3

L7 16 L2 AND L3 AND L4

=> s 12 (L) 13 (L) 14

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12250 L3
9 L2 (L) L3 (L) L4
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=> d 1-9 bib abs

L8

L8 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:259335 CAPLUS

DN 142:322379

TI Oral care compositions comprising a polymer obtained from cationic monomers and anionic or neutral monomers

IN Charmot, Dominique; Gibbs, Christopher David; Kolosov, Oleg; Liu, Mingjun; Nguyen, Son Hoai; Petro, Miroslav; Rannard, Steven Paul

PA Unilever Home & Personal Care USA, USA

SO U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 4

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PATENT NO.
                        KIND
                               DATE
                                         APPLICATION NO.
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PΙ
    US 2005063921
                         A1
                               20050324
                                          US 2003-666489
                                                                 20030919
    WO 2005027862
                        A1
                               20050331
                                           WO 2004-EP9267
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            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
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            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
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            SN, TD, TG
PRAI US 2003-665710
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                               20030919
    US 2003-665711
                         Α
                               20030919
    US 2003-666487
                         Α
                               20030919
    US 2003-666489
                         Α
                               20030919
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Oral care compns. comprise a polymer obtained by copolymg. a mixture of AB comonomers, said mixture comprising: (a) a cationic monomer selected from (ar-vinylbenzyl) trimethylammonium chloride, (dimethylaminopropyl) methacrylamide, [2 (methacryloyloxy) ethyl] trimethylammonium chloride, 2-aminoethylmethacrylate hydrochloride and mixts. thereof; and (b) at least one anionic or neutral monomer selected from styrene, mono-2-(methacryloyl)ethyl succinate, vinyl acetate, N, N-dimethylacrylamide, 2-ethylhexylacrylate, vinylphosphonic acid, acrylic acid, 2-acrylamido-2-methyl-1-propanesulfonic acid, N-[tris(hydroxymethyl)methyl] acrylamide, N-vinylpyrrolidone, Bu acrylate, 2-hydroxyethylacrylate, polyethyleneglycol methylethermethacrylate and mixts. thereof, said oral care composition is in the form of any one of a toothpaste, gel, foam, chewing gum, deformable strip or mouthwash and which is suitable for use in the oral cavity. (ar-vinylbenzyl) trimethylammonium chloride-styrene-N-[tris (hydroxymethyl)methyl]acrylamid e copolymer was prepared Adsorption of the polymer to hydroxyapatite disks and pig tongue was studied.

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L8 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 2005:259332 CAPLUS

DN 142:322376

TI Oral dentifrice compositions comprising cationic polymers

IN Charmot, Dominique; Gibbs, Christopher David; Kolosov, Oleg; Liu, Mingjun; Nguyen, Son Hoai; Petro, Miroslav; Rannard, Steven Paul

PA Unilever Home & Personal Care USA, USA

SO U.S. Pat. Appl. Publ., 6 pp. CODEN: USXXCO

DT Patent

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LA
     English
FAN.CNT 4
                            KIND
                                     DATE
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     PATENT NO.
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                                     20050324
                                                  US 2003-665710
PΙ
     US 2005063918
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     WO 2005027862
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                                     20050331
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               SN, TD, TG
                                     20030919
PRAI US 2003-665710
                             Α
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     US 2003-665711
                                     20030919
                              Α
                                     20030919
     US 2003-666487
     US 2003-666489
                              Α
                                     20030919
     Oral care composition containing a polymer obtainable by copolymg. a mixture of
AB
     comonomers, in which 40 mol% of the mixture of comonomers is constituted by
     a comonomer , e.g., H2C:CR(X)nY (where R = H or Me, X = divalent organic
     linking group, n = 0 or 1, and Y is a carboxylate or phosphonate anion),
     and in which the balance of the mixture of comonomers is constituted by
     neutral and/or cationic comonomers; the composition being in the form of any
     one of a toothpaste, gel, foam, chewing gum, deformable strip or mouthwash
     and being suitable for use in the oral cavity.
                                                             (ar-
     vinylbenzyl)trimethylammonium chloride-styrene-N-
      [tris(hydroxymethyl)methyl]acrylamide copolymer was prepared Adsorption of
     the polymer to hydroxyapatite disks and pig tongue was studied.
     ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
L8
     2005:141130 CAPLUS
AN
DN
     142:221262
     Phosphonic acid-modified microgel dispersion
ΤI
IN
     Mueller, Horst
     Bollig & Kemper G.m.b.H. & Co. K.-G., Germany
PA
so
     PCT Int. Appl., 32 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     German
FAN.CNT 3
                                                  APPLICATION NO.
                                                                             DATE
     PATENT NO.
                             KIND
                                     DATE
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                                                 WO 2004-IB51403
     WO 2005014678
                                     20050217
                                                                             20040805
PI
                             A1
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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               GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
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                                                  DE 2003-10336770
                                                                              20030808
      DE 10336770
                                     20050310
                              Α1
PRAI DE 2003-10336770
                                     20030808
                              Α
      An emulsifier-free water-thinnable microgel prepared by producing a OH- and
      COOH-group-containing polyacrylate in the presence of ≥1 phosphonic
      group-containing compound is used in water-thinnable base coats for the
      automobile industry. Thus, an acrylic dispersion prepared by radical
      polymerization of a mixture containing styrene, Bu methacrylate, lauryl
```

acrylate,

2-hydroxy ethylacrylate, vinylphosphonic acid and acrylic acid in Bu alc. 2 h at 120°, neutralized with dimethylethanolamine and crosslinked with melamine resin (Cymel 327) is burned together with polyester- and polyurethane dispersion (30 min at 140°) to get a base coat for steel.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L8
      ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
AN
      2004:354985 CAPLUS
DN
      140:358986
      Phosphonic acid-modified microgel dispersion
ΤI
IN
      Mueller, Horst
      Bollig & Kemper G.m.b.H. & Co. K.-G., Germany
PA
      PCT Int. Appl., 43 pp.
SO
      CODEN: PIXXD2
DT
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      German
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                                                      APPLICATION NO.
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                                                    WO 2003-DE3419
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PΙ
      WO 2004035642
                               A1
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      DE 10247847
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PRAI DE 2002-10247847
                                        20021014
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      DE 2003-10336770
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                                        20030808
      WO 2003-DE3419
                                W
                                        20031013
      Emulsifier-free microqel dispersions are prepared by polymerizing monounsatd.
AΒ
or
      polyunsatd. hydroxyl- and carboxy-group-containing acrylic and aromatic
      in the presence of phosphonic acid derivs. (e.g., reaction products of
      alkylphosphonic acids with epoxides or vinylphosphonic acid) in an aqueous
      medium with subsequent crosslinking with aminoplast (e.g., melamine
      resin), and, optionally, emulsion radical polymerization with
hydroxyl-containing
      monomer. The title microgel dispersion is useful for base coat manufacturing
in
      automotive finishes (in composition containing polyurethane and polyester
      dispersion with Al bronze in water/butyl glycol at pH 8.0-8.3) to enhance
      a metallic effect and adhesion to polycarbonate.
                 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 11
                 ALL CITATIONS AVAILABLE IN THE RE FORMAT
      ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
L8
      2001:903769 CAPLUS
ΑN
DN
      136:42566
      Antiplaque aqueous oral composition comprising water-soluble copolymer
ΤI
IN
      Bergeron, Vance; Labeau, Marie-Pierre
      Rhodia Chimie, Fr.
PΑ
      PCT Int. Appl., 18 pp.
SO
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CODEN: PIXXD2

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DT
     Patent
LΑ
     French
FAN.CNT 1
                        KIND DATE
                                           APPLICATION NO. DATE
     PATENT NO.
                                            ______
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                                 20011213 WO 2001-FR1710 20010601
                         A1
     WO 2001093820
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                 20011207 FR 2000-7144
                                                                     20000605
     FR 2809617
                          A1
                                 20020712
     FR 2809617
                          В1
                                 20000605
PRAI FR 2000-7144
                          Α
     The invention concerns an antiplaque oral composition comprising an aqueous
     carrier, a bactericidal agent and a water-soluble copolymer (C), said
     copolymer comprising a backbone (B) derived from an oxyalkylene oligomer
     or polymer (AO), and several grafts (G) derived from polymerization of: a water
     soluble ethylenically unsatd. carboxylic, sulfonic acid monomer (A), or one
     of its water soluble salts; and a water soluble ester monomer (E) of
     ethylenically unsatd. carboxylic acid; and of a water soluble ethylenically
     unsatd. phosphonated or phosphated monomer (P); the resp. amts. of
     monomers (A), (E) and (P) corresponding to 10 to 90 parts of (A) / 10 to 70
     parts of (E) / 0.1 to 50 parts of (P), for 100 parts of the total of
     monomers (A), (E) and (P) of the grafts (G), the relative amts. of
     backbone (B) and of grafts (G) corresponding to a (B)/(G) mass ratio from
     10/90 to 80/20; the average mole weight of said copolymer (C) being 50000 to
     2000000. A copolymer was prepared by the reaction of acrylic acid,
     hydroxyethyl acrylate (I), vinyl phosphonic acid (II), Antarox SC138 where the ratio of II:I was 5:9.3. The antiplaque activity of the polymer
     (absorption of triclosan on the hydroxyapatite disk) was 53%.
              THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 2
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
L8
     1996:289992 CAPLUS
ΑN
     124:319214
DN
     Water-soluble adhesive compositions, especially for bonding paper
TI
IN
     Czech, Zbigniew
     Lohmann Gmbh & Co. Kg, Germany
PA
SO
     Eur. Pat. Appl., 9 pp.
     CODEN: EPXXDW
     Patent
DT
LA
     German
FAN.CNT 1
                        KIND
                                 DATE APPLICATION NO.
                                                                     DATE
     PATENT NO.
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                                            EP 1995-112730
     EP 699726
                          A2
                                 19960306
                                                                     19950812
PΙ
                  A3
     EP 699726
                                 19980107
     EP 699726
                                 19990421
         R: BE, DE, FR, IT
                              19960307
19940901
     DE 4431053
                 A1
1053 A
                                             DE 1994-4431053
                                                                     19940901
PRAI DE 1994-4431053
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The title compns. contain a water-soluble copolymer of an unsatd. carboxylic acid, a C1-12 alkyl (meth) acrylate, and a polymerizable photoinitiator and a water-soluble plasticizer having mol. weight ≤4000. The compns. are useful for splicing the ends of rolls of paper, for labels, on tapes for use on packages, etc. An adhesive comprised an acrylic acid-4-(2-acryloyloxyethyl)phenyl 2-hydroxy-2-Pr ketone-Bu acrylate copolymer and polyethylene glycol (mol. weight 400).

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L8 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 1995:789160 CAPLUS

DN 123:170591

- TI Polymers of alkenesulfonic acids and vinylphosphonic acid or derivatives
- IN Hoffmann, Herrmann; Buch, Wolfgang; Gulden, Walter; Engelhardt, Fritz; Funk, Ruediger H.; Tardy, Aranka
- PA Hoechst A.-G., Germany
- SO Eur. Pat. Appl., 17 pp. CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|------|----------|-----------------|----------|
| | | | | | |
| ΡI | EP 643081 | A1 | 19950315 | EP 1994-113443 | 19940829 |
| | R: DE, DK, GB, | NL | | | |
| | DE 4330699 | A1 | 19950316 | DE 1993-4330699 | 19930910 |
| | NO 9403335 | Α | 19950313 | NO 1994-3335 | 19940909 |
| | JP 07173226 | A2 | 19950711 | JP 1994-216391 | 19940909 |
| PRAI | DE 1993-4330699 | Α | 19930910 | | |

AB Polymers useful in saline waters as alkaline earth sulfate and CaCO3 deposition inhibitors contain 50-99.5% alkenesulfonic acids CH2:C(R1)ZSO3R2 [R1 = H, Ph, alkyl; R2 = H, alkyl, NH4, alkali metal or alkaline earth ion; Z = (CH2)n (n = 0-4)] and 50-0.5% phosphonic acid derivative

CH2:CHPO(OR1)(OR2) (R1, R2 = H, alkyl, NH4, alkali metal or alkaline earth ion). Persulfate-initiated polymerization of 90 g ethenesulfonic acid and 10 g vinylphosphonic acid in 120 g H2O at 60° gave a clear, slightly viscous solution of copolymer (I) with weight-average mol. weight 10,000. The

concentration of I required to inhibit mineral deposit formation (BaSO4, tube plugging test) was 15 mg/L.

- L8 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1984:474785 CAPLUS
- DN 101:74785

min.

- TI Copolymers from monoethylenically unsaturated mono- and dicarboxylic acids (anhydrides)
- IN Denzinger, Walter; Hartmann, Heinrich; Trieselt, Wolfgang; Hettche, Albert; Schneider, Rolf; Raubenheimer, Hans Juergen
- PA BASF A.-G., Fed. Rep. Ger.
- SO Ger. Offen., 17 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

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| | PAT | CENT 1 | . OI | | | KINI |) | DATE | | AP | PLICA' | TION | NO. | DATE | |
| | | | | | | - - | | | | | | | | | |
| ΡI | DE | 3233 | 777 | | | A1 | | 1984 | 0315 | DE | 1982 | -3233 | 777 | 19820 | 911 |
| | ΕP | 1032 | 54 | | | A2 | | 1984 | 0321 | EP | 1983 | -1087 | 53 | 19830 | 906 |
| | ΕP | 1032 | 54 | | | A3 | | 1984 | 0502 | | | | | | |
| | ΕP | 1032 | 54 | | | В1 | | 1987 | 1216 | | | | | | |
| | | R: | ΑT, | BE, | CH, | DE, | FR, | GB, | IT, | LI, N | L, SE | | | | |
| | ΑT | 3142 | 1 | | | E | | 1988 | 0115 | AT | 1983 | -1087 | 53 | 19830 | 906 |
| | ES | 5255 | 10 | | | A1 | | 1984 | 0601 | ES | 1983 | -5255 | 10 | 19830 | 908 |
| | JP | 59064 | 4612 | | | A2 | | 1984 | 0412 | JP | 1983 | -1652 | 93 | 19830 | 909 |
| PRAI | DE | 1982 | -3233 | 3777 | | Α | | 1982 | 0911 | | | | | | |
| | ΕP | 1983 | -1087 | 753 | | Α | | 1983 | 0906 | | | | | | |
| | | | | | | | | | | | | | | | |

AB Copolymers of ≥1 monoethylenically unsatd. dicarboxylic anhydride containing 4-6 C, ≥1 monoethylenically unsatd. monocarboxylic acid containing 3-10 C, and, in some cases, other monoethylenically unsatd. monomers are prepared as powders by suspension polymerization at 50-180° in a solvent (other than benzene) in which the monomers are soluble and the copolymer is insol. At least one third of the dicarboxylic anhydride is present in the reactor before the polymerization begins, and the remainder is

added during a time period no greater than the time required to add the first two thirds of the monocarboxylic acid to the reactor. A protective colloid is present in the solvent during copolymn. to prevent agglomeration. The copolymers are used as incrustation inhibitors in laundering. Thus, a mixture of m-xylene 460, maleic anhydride (I) 68, and poly(iso-Bu vinyl ether) (K value 60) 1.7 parts was heated to 139°, treated with 36 parts I (at 70°) during 2 h and a mixture of 104 parts acrylic acid and 10.2 parts tert-Bu2O2 during 3 h, refluxed 2 h, and spray dried to give 199 g powdered copolymer [26677-99-6] (K value 19.9, containing 1.37% monomeric I).

- L8 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1984:424128 CAPLUS
- DN 101:24128
- TI Continuous copolymerization of monoethylenic unsaturated mono- and dicarboxylic acids
- IN Denzinger, Walter; Hartmann, Heinrich; Trieselt, Wolfgang; Hettche,
 Albert; Schneider, Rolf; Raubenheimer, Hans Juergen
- PA BASF A.-G. , Fed. Rep. Ger.
- SO Ger. Offen., 15 pp. CODEN: GWXXBX
- DT Patent
- LA German
- FAN.CNT 1

| L. PATA . C | -14 T | - | | | | | |
|-------------|-------|--------------|-----|-----------|-------------|-----------------|------------------|
| | PAT | TENT NO. | | KIND | DATE | APPLICATION NO. | DATE |
| | | | | | | | |
| PI | DE | 3233778 | | A1 | 19840315 | DE 1982-3233778 | 1982 0911 |
| | EΡ | 106111 | | A1 | 19840425 | EP 1983-108754 | 198 30906 |
| | EР | 106111 | | B1 | 19871209 | | |
| | | R: AT, BE, | CH, | DE, | FR, GB, IT, | LI, NL, SE | |
| | AT | 31318 | | E | 19871215 | AT 1983-108754 | 198 30906 |
| | ES | 525511 | | A1 | 19840601 | ES 1983-525511 | 198 30908 |
| | JP | 59066407 | | A2 | 19840414 | JP 1983-165294 | 19830 909 |
| | JР | 02057804 | | B4 | 19901206 | | |
| | CA | 1241490 | | A1 | 19880830 | CA 1983-436435 | 198 30909 |
| | US | 4725655 | | Α | 19880216 | US 1986-919583 | 198 61016 |
| PRAI | DE | 1982-3233778 | | Α | 19820911 | | |
| | EP | 1983-108754 | | Α | 19830906 | | |
| | US | 1983-530476 | | A1 | 19830908 | | |
| | US | 1984-674370 | | A1 | 19841126 | | |
| | US | 1985-730262 | | A1 | 19850506 | | |
| | US | 1985-811326 | | A1 | 19851219 | | |
| | | | | | | | |

AB In the title process, 10-60% unsatd. C4-6 dicarboxylic acid, anhydride, or salt is polymerized continuously with 40-90% unsatd. C3-10 monocarboxylic acid or salt (total acids 20-80% neutralized) and 0-20% comonomer in aqueous medium at 60-150° in a reactor cascade. Thus, adding a solution of maleic anhydride 72.3, acrylic acid 150, and H2O 153.4 parts, a solution of 28.5 parts 30% H2O2 and 56 parts H2O, and a solution of 85 parts NaOH in 225 parts H2O to the 1st of 3 reactors (all at 100°) and 100 parts 50% aqueous acrylic acid to the 2nd gave a 37% solution of copolymer [52255-49-9] with K-value (2% aqueous solution, fully neutralized) 46 and unreacted maleic acid content 0.76%.

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http://www.nlm.nih.gov/mesh/

http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

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MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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There are limits on the size of an answer set being crossed over from one file to another. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

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| 0.00 | -6.57 |
| | ENTRY 1.14 SINCE FILE ENTRY |

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